

# Hospital Standardized Mortality Ratio (Hospital Deaths)

## 2019 Re-Baselining of HSMR Results

In September 2019, CIHI updated the HSMR indicator methodology and the years of data used to establish the pan-Canadian baseline. Results calculated with the new methodology (using 2015–2016 to 2017–2018 data) replaced previous results in our private Your Health System web tool (YHS: Insight). The public release of updated HSMR results (in YHS: In Brief and In Depth) will follow in November 2019. These updates help to ensure that the HSMR measure remains relevant and useful.

As in-hospital mortality continues to improve across the country, periodic re-baselining of the HSMR methodology is essential to keep up with changes in clinical care and hospital mortality trends. This entails recalibrating HSMR risk-adjustment models using the recent years of data. As a result of the updated baseline, all HSMR values — national, jurisdictional, hospital — will be higher than those reported previously. It is important to remember that this shift affects all hospitals and jurisdictions in Canada, and these updated values cannot be compared with past results. For trending purposes, results for 5 years are provided using the new baseline.

The new results will give health system decision-makers a more accurate picture of current mortality rates in hospitals and of areas for improvement. This update is part of the normal evolution of an indicator such as the HSMR. Going forward, CIHI plans to re-baseline the HSMR in sync with scheduled changes to clinical administrative databases, classification systems and case-mix calculations; these normally occur every 3 years.



The hospital standardized mortality ratio (HSMR) is an important measure to improve quality of care in Canadian hospitals.

The HSMR measures whether the number of deaths for an organization is higher or lower than is predicted by the statistical model, based on the average experience of all Canadian hospitals. The HSMR risk-adjustment model includes factors that affect in-hospital mortality, such as patient age, sex, comorbidities and admission status. The ratio provides a starting point to assess mortality rates and identify areas for improvement to help reduce hospital deaths. Hospitals in Canada use the HSMR to monitor changes over time and to identify areas for improvement.

The Canadian Institute for Health Information (CIHI) has been reporting HSMR results publicly since 2007. CIHI last updated the HSMR methodology in 2015 (using 2012–2013 data).

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### Impact on HSMR results

- The new baseline leads to an increase in the HSMR results for all regions and hospitals.
- Trends and results relative to other organizations remain the same for almost all regions and hospitals.
- 5 years of results using the new methodology are provided for trending purposes.

### Timelines

- Results reflecting the new baseline have been available in YHS: Insight (the private web tool) since September 2019.
- The public release of updated HSMR results is scheduled for November 2019.

### Additional information

- [Methodology updates](#)
- [HSMR Technical Notes](#)
- [HSMR FAQ](#)
- [YHS: Insight web page](#)



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